

### CLAIMS

Claim 1. A hollow aquatic gliding board comprising:  
a lower half-shell having no lateral side-walls;  
an upper half-shell comprising a sheet of foam having downwardly curved side-walls;  
at least one longitudinal partition, at least said one longitudinal partition vertically connecting said lower and upper half-shells;  
said longitudinal partition being made of foam.

Claim 2. A hollow aquatic gliding board according to claim 1, wherein:  
said at least one longitudinal partition comprises a plurality of longitudinal partitions made of foam, said foam being exposed to an inner cavity of the board.

Claim 3. A hollow aquatic gliding board according to claim 1, wherein:  
said at least one longitudinal partition is made of an elastic foam, said elastic foam being exposed to an inner cavity of the board.

Claim 4. A hollow aquatic gliding board according to claim 2, wherein:  
said plurality of longitudinal partitions are made of an elastic foam.

Claim 5. A hollow aquatic board according to claim 1, wherein:  
said upper half-shell has been thermoformed to form said downwardly curved side-walls.

Claim 6. A hollow aquatic board according to claim 1, wherein:  
said lower half shell has not been thermoformed.

Claim 7. A hollow aquatic gliding board according to claim 1, wherein:

said upper half-shell and said lower half-shell are assembled by gluing a lower edge of said lateral sidewalls of said upper half-shell against an upper surface of said lower half-shell.

Claim 8. A hollow aquatic gliding board according to claim 1, wherein:

said foam sheet of said upper half-shell is laminated on opposite sides with at least one layer of resin-impregnated fibers.

Claim 9. A hollow aquatic gliding board according to claim 1, wherein:

said at least one partition is made of polypropylene foam.

Claim 10. A hollow aquatic gliding board according to claim 9, wherein:

said polypropylene foam comprises a polypropylene expanded particle foam having a density of approximately 60 kg/m<sup>3</sup>.

Claim 11. A hollow aquatic gliding board according to claim 10, wherein:

said polypropylene expanded particle foam has a compressive stress at 25 % of deformation of approximately 350 kPa measured according to ISO standard 844.

Claim 12. A hollow aquatic gliding board according to claim 9, wherein:

said polypropylene foam comprises a polypropylene expanded particle foam having a density of approximately 20-100 kg/m<sup>3</sup>.

Claim 13. A hollow aquatic gliding board according to claim 12, wherein:

said polypropylene expanded particle foam has a compressive stress at 25 % of deformation of approximately 100-600 kPa measured according to ISO standard 844.

Claim 14. A hollow aquatic gliding board according to claim 1, wherein:  
each of said at least one longitudinal partition extends along at least 70 percent of the length of the inner cavity.

Claim 15. An aquatic gliding board comprising:  
a deck having a downwardly concave transverse cross section, said deck comprising a foam material;  
a hull connected to said deck to form a subassembly, said hull comprising a foam material;  
at least one longitudinally extending partition positioned within said subassembly extending from said deck to said hull, said partition comprising a material having an elasticity to allow said deck to deflect under pressure of a foot of a surfer on said deck relative to said hull.

Claim 16. An aquatic gliding board according to claim 15, wherein:  
at least said one longitudinal partition is made of a polymeric foam, said foam having a longitudinal side surface exposed to an inner cavity of the board.

Claim 17. An aquatic gliding board according to claim 15, wherein:  
said material of said partition is an elastic foam.

Claim 18. An aquatic gliding board according to claim 15, wherein:  
said material of said partition is polypropylene foam.

Claim 19. An aquatic gliding board according to claim 18, wherein:  
said polypropylene foam comprises a polypropylene expanded particle foam.

Claim 20. An aquatic gliding board according to claim 15, wherein:  
said foam material of said deck and said foam material of said hull comprise a polystyrene foam.

Claim 21. An aquatic gliding board according to claim 20, wherein:  
said material of said partition is polypropylene foam.

Claim 22. An aquatic gliding board according to claim 21, wherein:  
said polypropylene foam comprises polypropylene expanded particle foam.

Claim 23. A hollow aquatic gliding board according to claim 15, wherein:  
said foam material of said deck and said foam material of said hull comprise an extruded polystyrene foam.

Claim 24. An aquatic gliding board according to claim 23, wherein:  
said material of said partition is polypropylene foam.

Claim 25. An aquatic gliding board according to claim 24, wherein:  
said polypropylene foam comprises polypropylene expanded particle foam.

Claim 26. A hollow aquatic gliding board according to claim 15, wherein:  
said foam material of said deck and said foam material of said hull comprise a thermoformed extruded polystyrene foam.

Claim 27. An aquatic gliding board according to claim 26, wherein:  
said material of said partition is polypropylene foam.

Claim 28. An aquatic gliding board according to claim 27, wherein:  
said polypropylene foam comprises polypropylene expanded particle foam.